

Replaced by
Ent. 34

CLAIMS

1. An optical filtering component including a tunable and wavelength selective filter (1) capable of transmitting the light in a narrow optical spectral band centered around a given wavelength and capable of reflecting the light whose wavelength is outside said band, an input guide (2) conducting light radiation (3) to the filter (1), characterized in that the input guide (2) conducts the radiation (3) to the filter (1) in order to perform a first pass through it, and in that the component includes means (6) for returning a first part (4) of the radiation (3) reflected by the filter (1) during the first pass in order to perform a second pass through it.
2. The optical filtering component as claimed in claim 1, characterized in that it includes a second output guide (10) conducting a fourth part (11) of the radiation reflected by the filter (1) during the second pass.
3. The optical filtering component as claimed in claim 2, characterized in that it includes collimation means common to the input guide (2), to the return means (6) and to the second output guide (10).
4. The optical filtering component as claimed in claim 3, characterized in that it includes a lens (12) arranged between, on the one hand, the filter (1) and, on the other hand, the input guide (2), the return means (6) and the second output guide (10).
5. The optical filtering component as claimed in claim 4, characterized in that the lens (12) is a graded index lens.
6. The optical filtering component as claimed in claim 5, characterized in that the lens (12) is such that its object focal plane coincides with an input face of the lens (12).
7. The optical filtering component as claimed in one of the preceding claims, characterized in that the return means (6) direct the first part (4) of the

radiation (3) to the filter (1), with the same incidence as the input guide (2).

8. The optical filtering component as claimed in one of the preceding claims, characterized in that it
5 includes means for tuning the given wavelength.

9. The optical filtering component as claimed in one of the preceding claims, characterized in that it includes means (20) for inserting replacement radiation whose length is substantially centered on the given
10 wavelength.

10. The optical filtering component as claimed in one of the preceding claims, characterized in that the return means (6) are produced by means for glass plate photolithography and ion exchange.

15 11. The optical filtering component as claimed in one of the preceding claims, characterized in that it includes means for amplifying the radiation reflected by the filter (1).